Blending Donor Funds for Impact: South Africa

South Africa's CTF Private Sector Renewable Energy Program

Source: Abengoa Solar

South Africa's power sector is the single largest source of the country's carbon emissions. In an effort to address its energy supply challenges while promoting a low carbon growth path, South Africa has embarked on an ambitious clean energy program that targets both renewable energy (RE) and energy efficiency (EE).

A key component of South Africa's clean energy strategy is the Renewable Energy Independent Power Producer program. Launched in August 2011, REIPP aims to award 3,600 MW of private sector concessions for RE production. $85 million of South Africa's Clean Technology Fund (CTF) allocation has been earmarked for IFC and the private sector arm of the African Development Bank (AfDB) to support pioneering private sector RE projects (see sidebar).

IFC's Renewable Energy CTF Program in South Africa

Under the REIPP program, IFC focused on supporting the government's efforts to promote Concentrated Solar Power (CSP) technology. CSP uses mirrors to reflect and concentrate the sun's rays to produce heat, which then generates steam that powers turbines and produces electricity. CSP can be combined with cost-effective energy storage solutions to produce power when the sun is not shining, overcoming intermittency concerns and potentially displacing fossil fuel-based generation due to its ability to provide reliable power around the clock. However, CSP is an expensive technology and has a limited track record, particularly in emerging markets. CTF funding under REIPP is therefore providing critical support for South Africa's concentrated solar power market as it looks to scale-up.

The CTF's CSP investments are also intended to establish a track record of performance, thereby lowering perceived risk and reducing future project costs for private sector CSP investors and developers.

Clean Technology Fund in South Africa

South Africa is one of 18 countries accessing the CTF to support climate-smart, low carbon economic growth. With $500 million from the CTF, South Africa is on its way to realize clean energy goals that include improving EE by 12 percent by 2015 and installing 17.8 GW of renewable energy capacity by 2030. South Africa's 17.8 GW of RE capacity target represents more than 40 percent of the country's planned power generation investments over the next 20 years, and at least 30% of this new RE generation capacity will be built by the private sector.

To meet this vision and yield tangible results, South Africa is working closely with multilateral development banks, including the World Bank, IFC, and the AfDB, as well as with business leaders.

The CTF represents one of the four funding windows that make up the multi-donor Climate Investment Funds. The CTF offers developing countries incentives to scale-up technologies that will reduce greenhouse gas emissions. Each CTF country's investment plan is tailored to align with country development objectives and environmental policy goals.

CTF-Supported Projects in South Africa

Located in the Northern Cape, the Abengoa Ka Xu and Khi projects are among the first independent power producers in the South Africa. In addition to the clean power generation that will benefit South African households, these projects will help bolster CSP's existing track record, particularly at larger scales (50MW and above), to further develop the market both domestically as well as in other emerging markets.

- **Abengoa KaXu—**The 100 MW KaXu Solar One project is a 310 hectare field of pivoting concave mirrors, or 'parabolic troughs,' which focus the sun's rays onto pipes that run along the center of the troughs and produce heat that is converted into steam used to generate electricity. IFC blended $26.5 million in concessional funds from the CTF with $81.8 million from its own account to help finance the project, which will help mitigate 268,000 metric tons of GHG emissions a year or roughly 2.7 million tons over 10 years.
- **Abengoa Khi—**The 50 MW Khi Solar One project is a 600 hectare, circular field containing more than 4,500 mirrored 'heliostats' which focus the sun's rays onto a central receiver atop a 200-meter tower. IFC blended $15 million in concessional funds from the CTF with $72.5 million from its own account alongside CTF's contribution to help finance the project, which will help mitigate 174,000 metric tons of GHG emissions a year or roughly 1.7 million tons over 10 years.

In addition to the investment projects above, IFC has also used CTF funds to provide energy-smart advisory services to the government of South Africa

- **AREAS South Africa—**With $500,000 of CTF funding, IFC is implementing the Africa Renewable Energy Advisory Services program to help the South African government meet its goal of universal electrification by 2020, with a particular focus on applying non-grid RE solutions to households currently without electricity. This project will help design and develop a National Electrification Road Map and an associated Non-grid Implementation Plan that identifies electrification pathways for off-grid housing. It is also identifying barriers to private sector involvement and helping investors develop non-grid RE products for the market.

Blended Finance at IFC

- IFC's Blended Finance for Climate (BFfC) Unit deploys concessional funds from donor partners alongside IFC's own commercial funds to catalyze climate-smart investments that wouldn't otherwise happen and that have a high development impact.
- BFfC addresses market barriers by using concessional financial instruments (i.e. soft loans, equity, guarantees) to undertake pioneering projects that directly combat climate change and have a strong potential to transform markets.
- Since 2010, BFfC has committed more than $206 million in concessional funds for climate-related investment and advisory projects. These funds enabled $980 million of IFC co-financing to support climate change projects that are collectively worth more than $3.4 billion.

Abengoa Khi site

Source: Abengoa Solar